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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
DEAN, RAYMOND S	

ART UNIT	PAPER NUMBER
2684	

DATE MAILED: 11/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/975,684	NANTZ ET AL.	
	Examiner	Art Unit	
	Raymond S Dean	2684	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 - 17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 - 17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *4*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed July 22, 2004 with respect to claims 1, 9, and 17 have been fully considered but they are not persuasive. Coash teaches a transmitter circuit comprising: an oscillator circuit including a surface acoustic wave (SAW) resonator (Figure 1, Column 2 lines 37 – 42), said oscillator circuit generates a carrier signal (Column 5 lines 10 – 26, the oscillated signal that is modulated is the carrier signal); and a carrier signal modulated with the data signal (Column 5 lines 10 – 26).

Anderson teaches an amplifier that transmits an FSK modulated signal. Modulation comprises multiplying or mixing an RF or carrier signal by or with an information signal (digital or analog) such that the amplitude, frequency, or phase is varied. FSK modulation comprises multiplying the carrier signal by a digital information signal such that the frequency is varied or shifted. The FSK modulation of Anderson enables the transmission of the binary data or digital information signal (Column 1 lines 48 – 52), which will be carried by the carrier. The digital information signal/carrier combination will be transmitted by the amplifier via the antenna thus enabling the receiver to receive said binary data. The amplifier therefore will receive both said digital information signal and said carrier signal thus enabling said combination to be transmitted.

Coash and Anderson both teach a transmitter comprising an oscillator circuit and a SAW resonator thus it would have been obvious to one of ordinary skill in the art at

the time the invention was made to use the amplifier taught in Anderson in the transmitter of Coash for the purposes of performing multiple tasks of stable oscillator switching and amplification sufficient to drive the antenna to a readily detectable output level as taught by Anderson.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1 – 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Coash (4,684,853) in view of Anderson (5,367,537).

Regarding Claim 1, Coash teaches a transmitter circuit comprising: an oscillator circuit including a surface acoustic wave (SAW) resonator (Figure 1, Column 2 lines 37 – 42), the oscillator circuit generating a carrier signal (Column 5 lines 10 – 26, the modulated frequency is the carrier frequency); and a carrier signal modulated with the data signal (Column 5 lines 10 – 26).

Coash does not specifically teach an amplifier circuit receiving the carrier signal and receiving a data signal, the amplifier circuit generating an output signal.

Anderson teaches an amplifier circuit receiving the carrier signal and receiving a data signal (Figure 1, Column 1 lines 56 – 64, Column 2 lines 13 – 31, the data stream

modulates the carrier such that there are two distinct carrier frequencies), the amplifier circuit generating an output signal (Figure 1, Column 2 lines 13 – 17, Column 2 lines 29 – 31, the output signal is transmitted to the antenna).

Coash and Anderson both teach a transmitter comprising an oscillator circuit and a SAW resonator thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the amplifier taught in Anderson in the transmitter of Coash for the purposes of performing multiple tasks of stable oscillator switching and amplification sufficient to drive the antenna to a readily detectable output level.

Regarding Claim 2, Coash in view of Anderson teaches all of the claimed limitations recited in Claim 1. Anderson further teaches an antenna coupled to the amplifier circuit to transmit the output signal (Figure 1, Column 2 lines 13 – 17, Column 2 lines 29 - 31).

Regarding Claim 3, Coash in view of Anderson teaches all of the claimed limitations recited in Claim 1. Coash further teaches control logic configured to generate the data signal (Figure 4, Column 6 lines 9 – 11, signal processor is the control logic).

Regarding Claim 4, Coash teaches all of the claimed limitations recited in Claim 3. Coash further teaches control logic comprising a microprocessor (Column 6 lines 9 – 11, the signal processor is a more robust microprocessor).

Regarding Claim 5, Coash teaches all of the claimed limitations recited in Claim 3. Coash further teaches an assertable switch connected to the control logic, wherein

the control logic is configured such that assertion of the switch causes the control logic to generate the data signal (Figure 4, Column 6 lines 8 – 11).

Regarding Claim 6, Coash in view of Anderson teaches all of the claimed limitations recited in Claim 1. Coash further teaches a bipolar junction transistor (Figure 1, Column 2 lines 37 – 42).

Regarding Claim 7, Coash in view of Anderson teaches all of the claimed limitations recited in Claim 1. Anderson further teaches a bipolar junction transistor (Figure 2, Column 2 lines 48 – 50).

Regarding Claim 8, Coash in view of Anderson teaches all of the claimed limitations recited in Claim 1. Anderson further teaches wherein the carrier signal has a frequency of at least 300 MHz (Column 3 lines 26 – 29).

Regarding Claim 9, Coash teaches an article of manufacture comprising: a housing (Figure 4, Column 6 lines 1 – 3, the sending unit is the housing); at least one circuit board (Figure 2, Column 3 lines 30 – 33); an oscillator circuit on the at least one circuit board (Figure 2, Column 3 lines 30 – 33); the oscillator circuit including a surface acoustic wave (SAW) resonator (Figure 1, Column 2 lines 37 – 42), the oscillator circuit generating a carrier signal (Column 5 lines 10 – 26, the modulated frequency is the carrier frequency); and a carrier signal modulated with the data signal (Column 5 lines 10 – 26).

Coash does not specifically teach an amplifier circuit on the at least one circuit board, the amplifier circuit receiving the carrier signal and receiving a data signal, the amplifier circuit generating an output signal.

Anderson teaches an amplifier circuit on the at least one circuit board (Figure 2, Column 2 lines 48 – 55), the amplifier circuit receiving the carrier signal and receiving a data signal (Figure 1, Column 1 lines 56 – 64, Column 2 lines 13 – 31, the data stream modulates the carrier such that there are two distinct carrier frequencies), the amplifier circuit generating an output signal (Figure 1, Column 2 lines 13 – 17, Column 2 lines 29 – 31, the output signal is transmitted to the antenna).

Coash and Anderson both teach a transmitter comprising an oscillator circuit and a SAW resonator thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the amplifier taught in Anderson in the transmitter of Coash for the purposes of performing multiple tasks of stable oscillator switching and amplification sufficient to drive the antenna to a readily detectable output level.

Regarding Claim 10, Coash in view of Anderson teaches all of the claimed limitations recited in Claim 9. Anderson further teaches an antenna coupled to the amplifier circuit to transmit the output signal (Figure 1, Column 2 lines 13 – 17, Column 2 lines 29 - 31).

Regarding Claim 11, Coash in view of Anderson teaches all of the claimed limitations recited in Claim 9. Coash further teaches control logic configured to generate the data signal (Figure 4, Column 6 lines 9 – 11, signal processor is the control logic).

Regarding Claim 12, Coash teaches all of the claimed limitations recited in Claim 11. Coash further teaches control logic comprising a microprocessor (Column 6 lines 9 – 11, the signal processor is a more robust microprocessor).

Regarding Claim 13, Coash teaches all of the claimed limitations recited in Claim 11. Coash further teaches an assertable switch connected to the control logic, wherein the control logic is configured such that assertion of the switch causes the control logic to generate the data signal (Figure 4, Column 6 lines 8 – 11).

Regarding Claim 14, Coash in view of Anderson teaches all of the claimed limitations recited in Claim 9. Coash further teaches a bipolar junction transistor (Figure 1, Column 2 lines 37 – 42).

Regarding Claim 15, Coash in view of Anderson teaches all of the claimed limitations recited in Claim 9. Anderson further teaches a bipolar junction transistor (Figure 2, Column 2 lines 48 – 50).

Regarding Claim 16, Coash in view of Anderson teaches all of the claimed limitations recited in Claim 9. Anderson further teaches wherein the carrier signal has a frequency of at least 300 MHz (Column 3 lines 26 – 29).

Regarding Claim 17, Coash teaches a method of transmitting comprising: generating a carrier signal with an oscillator circuit including a surface acoustic wave (SAW) resonator (Figure 1, Column 2 lines 37 – 42, Column 5 lines 10 – 26, the modulated frequency is the carrier frequency); generating a data signal (Figure 4, Column 6 lines 9 – 11); and a carrier signal modulated with the data signal (Column 5 lines 10 – 26).

Coash does not specifically teach generating an output signal with an amplifier circuit receiving the carrier signal and receiving the data signal; and transmitting the output signal.

Anderson teaches generating an output signal with an amplifier circuit receiving the carrier signal and receiving the data signal (Figure 1, Column 1 lines 56 – 64, Column 2 lines 13 – 31, the data stream modulates the carrier such that there are two distinct carrier frequencies); and transmitting the output signal (Figure 1, Column 2 lines 13 – 17, Column 2 lines 29 – 31).

Coash and Anderson both teach a transmitter comprising an oscillator circuit and a SAW resonator thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the amplifier taught in Anderson in the transmitter of Coash for the purposes of performing multiple tasks of stable oscillator switching and amplification sufficient to drive the antenna to a readily detectable output level.

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Raymond S Dean whose telephone number is 703-305-8998. The examiner can normally be reached on 7:00-3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay A Maung can be reached on 703-308-7745. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Raymond S. Dean
October 22, 2004

NAY MAUNG
SUPERVISORY PATENT EXAMINER